SAFETY DATA SHEET

1. Identification

Product identifier: [redacted]

Other means of identification
Synonyms: Silylated polyurethane

Recommended use and restriction on use
Recommended use: Experimental product.
Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information

Contact person

Telephone

Emergency telephone number
Supplier

[redacted]

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids	Category 3

Health Hazards

Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1B

Unknown toxicity - Health

Acute toxicity, oral	0 %
Acute toxicity, dermal	0 %
Acute toxicity, inhalation, vapor	0 %
Acute toxicity, inhalation, dust or mist	0 %

Label Elements

Hazard Symbol:

Signal Word: Danger

Hazard Statement:
H226; Flammable liquid and vapor.
H340; May cause genetic defects.
H350; May cause cancer.

Precautionary Statements

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting/…] equipment. Use non-sparking tools. Take action to prevent static discharges. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF exposed or concerned: Get medical advice/attention. In case of fire: Use… to extinguish.

Storage: Store in a well-ventilated place. Keep cool. Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

Substance(s) formed under the conditions of use: Reacts with water liberating small amounts of methanol.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*	Notes
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM.	64742-95-6	10 - <20%	# This substance has workplace exposure limit(s).
n-butylacetate	123-86-4	5 - <10%	# This substance has workplace exposure limit(s).
Methanol	67-56-1	0.1 - <1%	# This substance has workplace exposure limit(s).

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion: If conscious, drink plenty of water. Call a physician or poison control center immediately.

Inhalation: Move the exposed person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering 100% oxygen. Consult a physician for specific advice.

Skin Contact: Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Call a physician or poison control center immediately. Wash contaminated clothing before reuse.

Eye contact: Important! Immediately rinse with water for at least 15 minutes. Call a physician or poison control center immediately.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: Treatment is symptomatic and supportive.

5. Fire-fighting measures

General Fire Hazards: Do not use water jet as an extinguisher, as this will spread the fire. Use water spray to keep fire-exposed containers cool.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Alcohol resistant foam. Carbon dioxide Dry chemical.
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.
Specific hazards arising from the chemical:	Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Ground container and transfer equipment to eliminate static electric sparks.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Product may charge electrostatically during pouring or filling. All equipment used when handling the product must be grounded.
Special protective equipment for fire-fighters:	Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Avoid contact with eyes, skin, and clothing. Keep out of reach of children. Attention: Not for injection into humans.
Methods and material for containment and cleaning up:	Warn other workers of spill. Wear proper protective equipment as specified in the protective equipment section. Wipe, scrape, or soak up in an inert material and put in a container intended for flammable materials for disposal.
Notification Procedures:	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
Environmental Precautions:	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling:	Sensitivity to static discharge is expected; material has a flash point below 200 F. Do not breathe vapor/spray. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. See Section 8 of the SDS for Personal Protective Equipment. Wash hands after handling. Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures.

Conditions for safe storage, including any incompatibilities: Keep away from heat, sparks and open flame. Keep container closed. Store in original container.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values		Source
n-butylacetate	TWA	50 ppm		US. ACGIH Threshold Limit Values (03 2016)
	STEL	150 ppm		US. ACGIH Threshold Limit Values (03 2016)
	REL	150 ppm	710 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	200 ppm	950 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	150 ppm	710 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	150 ppm	710 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	200 ppm	950 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	150 ppm	710 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	200 ppm	950 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL		2,300 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL		290 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL		11,000 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	AN ESL		1,400 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	STEL	200 ppm	950 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (01 2015)
	TWA PEL	150 ppm	710 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (01 2015)
Methanol	TWA	200 ppm		US. ACGIH Threshold Limit Values (03 2015)
	STEL	250 ppm		US. ACGIH Threshold Limit Values (03 2015)
	STEL	250 ppm	325 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	200 ppm	260 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	200 ppm	260 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	200 ppm	260 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	250 ppm	325 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	200 ppm	260 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	250 ppm	325 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	AN ESL		2,100 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)

	AN ESL	1,600 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	3,900 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	ST ESL	3,000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (11 2016)
	TWA PEL	200 ppm 260 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (01 2015)
	Ceiling	1,000 ppm	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (01 2015)
	STEL	250 ppm 325 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (01 2015)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Methanol (methanol: Sampling time: End of shift.)	15 mg/l (Urine)	ACGIH BEI (03 2015)

Appropriate Engineering Controls Provide eyewash station and safety shower. Use only in well-ventilated areas. Observe good industrial hygiene practices.

Individual protection measures, such as personal protective equipment

General information: General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment.

Eye/face protection: Safety glasses with side shields

Skin Protection

Hand Protection: Use chemical-resistant, impervious gloves.

Other: Long sleeves Safety shoes

Respiratory Protection: If ventilation is insufficient, suitable respiratory protection must be provided. Respirator with a vapour filter (EN 141) If engineering control measures or administrative control measures are not sufficient to protect against inhalation exposures, each worker that is reasonably likely to be exposed must use NIOSH/MSHA approved respiratory protection with organic vapor protection and a APF of at least 25.

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wear suitable gloves and eye/face protection. Avoid inhalation of vapors and spray mists.

9. Physical and chemical properties

Appearance	
Physical state:	liquid
Form:	liquid
Color:	Colorless
Odor:	Aromatic
Odor threshold:	No data available.
pH:	Not determined.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	160 °C
Flash Point:	48.3 °C
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Heat of combustion:	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Density:	1.018 g/cm3
Relative density:	1
Solubility(ies)	
Solubility in water:	No data available.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water) Log Pow:	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
SADT:	No data available.
Viscosity, dynamic:	No data available.
Viscosity, kinematic:	No data available.
VOC:	No data available.

10. Stability and reactivity

Reactivity:	No dangerous reaction if used as recommended.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerisation does not occur.

Conditions to avoid: Keep away from moisture.

Incompatible Materials: Exothermic reaction occurs if combined with: Acids. Alkalies. Strong oxidizing agents. Alcohols. Material reacts with water.

Hazardous Decomposition Products: In case of fire, very toxic gases/vapors (e.g. NOx, isocyanates) may be formed. In case of fire, gives off (emits): Carbon oxides Oxides of silicon. Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant. Acute overexposure to the products of combustion may result in irritation of the respiratory tract.

11. Toxicological information

Information on likely routes of exposure

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: ATEmix: 41,666.67 mg/kg

Dermal
Product: ATEmix: 125,000 mg/kg

Inhalation
Product: ATEmix: 1,250 mg/l

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative potential
Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM.	No data available.
n-butylacetate	No data available.
Methanol	No data available.

Other adverse effects: No data available.

13. Disposal considerations

General information: The generation of waste should be avoided or minimized wherever possible. Do not discharge into drains, water courses or onto the ground. See Section 8 for information on appropriate personal protective equipment.

Disposal instructions: Disposal should be made in accordance with federal, state and local regulations.

Contaminated Packaging: Dispose of as unused product.

14. Transport information

DOT

UN Number:	UN 1993
UN Proper Shipping Name:	Flammable liquids, n.o.s.(BUTYL ACETATE)
Transport Hazard Class(es)	
Class:	3
Label(s):	3
Packing Group:	III
Marine Pollutant:	No

IMDG

UN Number:	UN 1993
UN Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S.(BUTYL ACETATE)
Transport Hazard Class(es)	
Class:	3
Label(s):	3
EmS No.:	F-E, S-E
Packing Group:	III
Marine Pollutant:	No
Limited quantity	5.00L
Excepted quantity	E1

IATA

UN Number:	UN 1993
Proper Shipping Name:	Flammable liquid, n.o.s.(BUTYL ACETATE)
Transport Hazard Class(es):	
Class:	3
Label(s):	3
Packing Group:	III
Cargo aircraft only Packing Instructions:	366
Passenger and cargo aircraft Packing Instructions:	366
Limited quantity: Packing Instructions:	Y344
Excepted quantity	E1
Environmental Hazards:	Not regulated.
Marine Pollutant:	No

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity	Reportable quantity
n-butylacetate	5,000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Hazards Not Otherwise Classified (HNOC)
Flammable (gases, aerosols, liquids, or solids)
Germ Cell Mutagenicity
Carcinogenicity

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

Chemical Identity	Reportable quantity
n-butylacetate	5,000 lbs.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM.	10000 lbs
n-butylacetate	10000 lbs
Methanol	10000 lbs

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

Chemical Identity	Reportable quantity
n-butylacetate	Reportable quantity: 5,000 lbs.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

WARNING
Reproductive Harm - www.P65Warnings.ca.gov

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity

Silylated Polyurethane
SOLVENT NAPHTHA (PETROLEUM), LIGHT AROM.
n-butylacetate
Organosilane Ester

Methanol

US. Massachusetts RTK - Substance List

Chemical Identity
n-butylacetate

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
n-butylacetate

US. Rhode Island RTK

Chemical Identity
n-butylacetate

Inventory Status:

Australia AICS:	n (Negative listing)	Remarks: None.
Canada DSL Inventory List:	q (quantity restricted)	Remarks: q (quantity restricted)
EU EINECS List:	y (positive listing)	Remarks: None.
Japan (ENCS) List:	n (Negative listing)	Remarks: None.
China Inventory of Existing Chemical Substances:	n (Negative listing)	Remarks: None.
Korea Existing Chemicals Inv. (KECI):	n (Negative listing)	Remarks: None.
Canada NDSL Inventory:	n (Negative listing)	Remarks: None.
Philippines PICCS:	n (Negative listing)	Remarks: None.
US TSCA Inventory:	T (temporary special case)	Remarks: None.
New Zealand Inventory of Chemicals:	n (Negative listing)	Remarks: None.

16.Other information, including date of preparation or last revision

HMIS Hazard ID

Health	*	1
Flammability		2
Physical Hazards		1
PERSONAL PROTECTION		

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

Issue Date: 12/06/2018

Revision Date: No data available.

Version #: 2.2

Further Information: No data available.

Disclaimer:

Notice to reader

Unless otherwise specified in section 1, [redacted] products are intended for use in the manufacture and/or formulation of products and are not intended for direct consumer use. These products are not intended for long-lasting (> 30 days) implantation, injection or direct ingestion into the human body, nor for use in the manufacture of multiple use contraceptives.
Keep out of the reach of children.

Further Information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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